

the steps of:

(i) etching said semiconductor sample, including said at least two adjacent films, using a resist mask, by means of a first plasma formed in a first gas with first processing conditions, residual corrosive compounds being left on the sample after the etching,

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cont.

(ii) after step (i), ashing the sample by means of a second plasma to remove at least the resist mask and said residual corrosive compounds formed in step (i), said second plasma being formed in a second gas and with second processing conditions, said ashing being carried out at a second location different from a first location where said etching is carried out, and wherein the semiconductor sample having the laminate is transferred from said first location to said second location through an atmosphere having a pressure reduced from atmospheric pressure,

(iii) contacting a surface of said sample etched in step (i) and ashed in step (ii) with at least one liquid which effects at least one of (a) removal of said residual corrosive compounds formed in step (i) which were not removed in step (ii) and (b) passivation of said surface etched in step (i) and ashed in step (ii), and

(iv) after step (iii), drying the sample.

C2

SUB 2

27. (Twice Amended) A method of processing a semiconductor sample having a laminate of at least two adjacent layers overlying a semiconductor substrate and a resist mask formed on said laminate, said at least two adjacent layers respectively being made of different materials from each other and having different ionization tendencies from each other, whereby corrosion could be

generated and accelerated due to battery action between layers of the laminate, including said at least two adjacent layers, comprising the steps of:

(i) etching each of said at least two layers of said laminate through said resist mask, by means of a first plasma, so as to form an etched sample having an etched shape which corresponds to a pattern of said resist mask, residual corrosive compounds from the etching being left on the etched sample;

C2
cont.

(ii) after step (i), treating the etched sample by means of a second plasma, to remove said residual corrosive compounds formed in step (i) and to remove said resist mask, said treating being carried out at a second location different from a first location where said etching is carried out, and wherein the semiconductor sample having the laminate is transferred from said first location to said second location through an atmosphere having a pressure reduced from atmospheric pressure;

(iii) contacting a surface of said semiconductor sample etched in step (i) and treated in step (ii) with at least one liquid, to remove said residual corrosive compounds which were not removed in step (ii); and

(iv) after step (iii), drying the semiconductor sample.

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Please add the following new claim to the application:

C3

--66. A method according to claim 27, wherein said different materials, which have different ionization tendencies, are selected from the group consisting of Al, Cu and refractory metals, alloys of at least one of Al, Cu and refractory metals, alloys of at least one of Al, Cu and refractory metals and also containing silicon, silicides of refractory metals, TiN and TiW.